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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/825,556

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Hiroyasu Ide

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EXAMINER

VANCHY JR, MICHAEL J

ART UNIT

PAPER NUMBER

2624

MAIL DATE

DELIVERY MODE

06/11/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/825,556 | Applicant(s) IDE, HIROYASU | |
| | Examiner MICHAEL VANCHY JR | Art Unit 2624 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 March 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5,7-10,16 and 18-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5,7-10,16 and 18-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 5, 7-10, 16, and 18-20 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. **Claims 5, 7-10, 16, 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over McClurg et al. US 6,744,910 B1 and further in view of Horinouchi JP 2001184490.**

Regarding claim 5, McClurg teaches a pixel value detecting unit which detects a respective maximum value and a respective minimum value from fingerprint image data

output from each of the image pickup elements; a pixel value range detecting unit which detects a pixel value range between the respective maximum value and the respective minimum value detected by the pixel value detecting unit for the fingerprint image data read by each of the image pickup elements (col. 7, line 53 to col. 8, line 5); a normalized data generating unit which generates, for each pixel of the fingerprint image data, normalized data that indicates a ratio of a pixel value of the pixel to the pixel value range corresponding to the image pickup element which read the pixel (Figs. 2A, 3A-3C, 5A, and 5B, Abstract, col. 7, lines 29-52); a normalized data average calculating unit which calculates averages, corresponding respectively to the image pickup elements, of the normalized data generated by the normalized data generating unit from the fingerprint image data read by the respective image pickup elements (Fig. 5A, col. 2, lines 60-64, col. 6, lines 3-26, 55-64); and a pixel value correcting unit which corrects a pixel value of each of the pixels of the fingerprint image data based on: (i) the average calculated by the normalized data average calculating unit corresponding to the image pickup element which read the pixel, and (ii) a maximum possible pixel value of the pixels (col. 6, lines 64-67, col. 7, lines 4-14).

McClurg teaches a hand-held fingerprint scanner (Abstract, Figs. 4A and 4B). However, McClurg is silent on the sensor being a line sensor. Eventhough, the scanner in McClurg can be used as a line sensor Horinouchi teaches using a line sensor to capture fingerprint images. Therefore, it would be clear to one of ordinary skill in the art to modify the sensor used in McClurg to be a line sensor as in Horinouchi.

Regarding claim 7, McClurg teaches wherein the pixel value detecting unit comprises: a designated value recording unit which records a designated value that indicates an order of the pixel values of the pixels of the fingerprint image data output from the image pickup elements; a unit which determines, as the respective maximum value for the fingerprint image data from each of the image pickup elements, a pixel value of a pixel of the fingerprint image data output from the image pickup element that is an x-th largest pixel value recorded by the designated value recording unit, which is determined with reference to a maximum value detected from the fingerprint image data

output from the image pickup element, and which determines, as the respective minimum value for the fingerprint image data from each of the image pickup elements, a pixel value of a pixel of the fingerprint image data output from the image pickup element that is a y-th smallest pixel value recorded by the designated value recording unit, which is determined with reference to a minimum value detected from the fingerprint image data output from the image pickup element (Fig. 5B, col. 7 line 53 to col. 8 line 5).

Regarding claim 8, McClurg teaches wherein the pixel value detecting unit includes: a designated value recording unit which records a designated value that indicates an order of the pixel values of the pixels of the fingerprint image data output from the image pickup elements; a unit which determines, as the respective maximum value for the fingerprint image data from each of the image pickup elements, an average of pixel values from a maximum pixel value detected from the fingerprint image data output from the image pickup element to an x-th pixel value recorded by the designated value recording unit, which is determined with reference to a minimum value detected from the fingerprint image data output from the image pickup element, and which determines, as the respective minimum value for the fingerprint image data from each of the image pickup elements, an average of pixel values from a minimum pixel value detected from the fingerprint image data output from the image pickup element to a y-th pixel value recorded by the designated value recording unit, which is determined with reference to a minimum value detected from the fingerprint image data output from the image pickup element (Figs. 5A and 5B, col. 7 line 53 to col. 8 line 5, col. 6, lines 3-26, 55-67).

Regarding claim 9, Horinouchi teaches further comprising a hollow transparent roller which is rotatably mounted at a main body of the image processing apparatus, and wherein the line sensor is fixed in the roller (Abstract).

Regarding claim 10, Horinouchi teaches wherein the line sensor reads a fingerprint image of a finger that is in contact with the roller to obtain the fingerprint image data.

Regarding claim 16, see rejection made to claim 5 for it addresses the apparatus of this method.

Regarding claim 18, see rejection made to claim 7 for it addresses the apparatus of this method.

Regarding claim 19, see rejection made to claim 8 for it addresses the apparatus of this method.

Regarding claim 20, see rejection made to claim 10 for it addresses the apparatus of this method.

Conclusion

1. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL VANCHY JR whose telephone number is (571)270-1193. The examiner can normally be reached on Monday - Friday 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Samir Ahmed can be reached on (571) 272-7413. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/825,556
Art Unit: 2624

Page 7

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